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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/469,409	12/22/1999	BRIAN A. PETERSEN	M-7907-US	4940

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EXAMINER

POLLACK, MELVIN H

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/469,409

Applicant(s)

PETERSEN ET AL.

Examiner

Melvin H Pollack

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-12,14,15,17-20,22-25 and 27-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,14,15,17,18,20,22,23,25,27 and 28 is/are rejected.
- 7) ☒ Claim(s) 5,19,24 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: see attached office action.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 26 January 2004 have been fully considered but they are not persuasive in regards to the 102 rejection. The reasons for such are given below.
2. Applicant's arguments, see Pp. 12-14, filed 26 January 2004, with respect to claims 5, 19, 24 and 29 have been fully considered and are persuasive. The USC103 rejection of claims 5, 19, 24, and 29 has been withdrawn.
3. The applicant reserves the right to argue that Lakshman is nonanalogous art. In response to future arguments regarding this fact, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Lakshman clearly fulfills this test. A further explanation will be given in response to future arguments.
4. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "deconstructing, editing, etc.") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).
5. The applicant makes arguments regarding the definition of "deconstructing a packet." (P. 9, lines 30-32. The examiner counters that such a term is generally regarded as broad in the art, and references a wide variety of activities, provided they provide the intended result of

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determining the header information. This includes the filtering of information, which is known in the art to be a form of deconstruction and which is admitted by the applicant to be included in Lakshman (P. 9, lines 15-20). As it stands, the claim is broad enough that Laksham clearly reads on this limitation. Further, the applicant does not disclose how the instant application's method of deconstruction differs from the Laksham method, except in that it doesn't use the exact terminology. Therefore, the examiner maintains that these activities are functionally equivalent, and the rejection stands. To get around this issue, the applicant must amend the claims to clarify and specify the method of deconstruction and/or the actual results.

6. A similar analysis can be used in regards to said searching, said editing, said forming a search argument and said coordinating. All of these functions are taught in Lakshman, given the inherent broadness of the terms and that the examiner has searched for functional equivalent rather than precise semantic terminology. Further, the applicant has failed to show, in any of these cases, the differences between Laksham and his own particular method of searching, etc. Instead, he has simply rewritten the teachings of Laksham in differing terminology and implied that they are different without showing how. The applicant is urged to amend the claims to clarify and specify the methods and results of these functions.

7. The applicant further argues that the examiner does not adequately disclose that discrete processors perform the mentioned functions. The examiner respectfully disagrees. The applicant admits that, for each of the areas that examiner pointed to previously, that hardware is used to store parameters and to control performance in order to fulfill at least one task (i.e. P. 10, lines 16-18. As such, they fulfill the definition of a processor as known in the art. Further, the examiner does not consider as allowable subject matter the splitting up of tasks so that each task

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is done by one and only one processing component. That said, the examiner holds that each device shown prior is at least part of a single, discrete processor. For example, elements 260 and 276 are parts of processing element(s) 250a...n. Element 295 is a discrete processor, separate from 250, that controls element 225. The examiner assumes that the processors do not have to be placed on separate boards or separate network elements, and the examiner is invited to amend the claims to discuss this issue.

8. As for claim 5, the examiner had noted that Spinney teaches, as previously shown, that the system may search with arguments other than that in the header information. However, Spinney does not expressly disclose that this search technique involves modifying the search argument, as opposed to using multiple search arguments. Therefore, the examiner agrees with the applicant on this issue.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1, 3, 4, 6, 7, 9-12, 14, 15, 17, 18, 20, 22, 23, 25, 27 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Lakshman et al. (5,951,651).

11. For claim 1, Lakshman teaches a method (see abstract) of packet processing (col. 1, lines 5-10) comprising:

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- a. Parsing a packet (col. 2, lines 21-26) using a first peripheral processor (Fig. 8a, #225), said packet having a header portion (Fig. 1; col. 1, lines 15-17), to determine a vector (col. 2, lines 25-50);
 - b. Coordinating processing using said vector (col. 6, lines 5-10);
 - c. Deconstructing said packet header to form header data (Fig. 4, 6; col. 6, lines 35-45) using a second peripheral processor (Fig. 8b, #260 and #276);
 - d. Searching one or more data structures based on said header data to produce search results (Fig. 7; col. 4, lines 48-67; col. 5, 41-65; col. 6, lines 13-30) using a third peripheral processor (Fig. 8b, #280);
 - e. Editing said packet (where editing can be modifying the header and/or filtering packets and/or other packet modification rules) based on said search results, said header data, and said vector (col. 6, lines 29-34) using a fourth peripheral processor (Fig. 8a, #295 and #225);
 - f. Wherein said coordinating comprises:
 - i. Storing data within a shared register set coupled to each of said peripheral processors (Fig. 8b, #279),
 - ii. Sharing said data with said parsing, said deconstructing, said searching, and said editing (col. 5, lines 5-17; col. 6, lines 25-34), and
 - iii. Monitoring said deconstructing, said searching, and said editing (Fig. 8a, #210; Fig. 8b, #260 and #265).
12. For claim 3, Lakshman also teaches buffering said packet before said parsing (col. 1, lines 30-31; col. 6, lines 7-10).

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13. For claim 4, Lakshman teaches that said deconstructing further comprises forming a search argument, and said searching uses said search argument (col. 4, lines 47-63).

14. Claim 6 is a system version of claim 1, and also teaches that a central processor is used to coordinate the method of claim 1, which Lakshman also teaches (Fig. 8a, #260).

15. For claim 7, Lakshman teaches that the central processor comprises a general purpose processor (col. 2, lines 50-53).

16. For claim 9, Lakshman teaches that the central processor comprises more than one processor acting in concert (col. 5, lines 45-50).

17. For claim 10, Laksham teaches that one or more of said peripheral processors comprise fixed logic circuits (col. 5, line 67).

18. For claim 11, Laksham teaches that one or more of said peripheral processors comprise programmable logic circuits (col. 6, line 1).

19. For claim 12, Laksham teaches that one or more of said peripheral processors comprise programmable state machine (col. 6, lines 1, 60-65).

20. For claim 14, Laksham teaches that said central processor and at least one peripheral processor together form at least a part of a single application specific integrated circuit (col. 5, line 67).

21. Claims 15, 17, and 18 are drawn to a hardware system that implements the method drawn in claims 1, 3, and 4, respectively. It is well known in the art that a system implementation is functionally equivalent to the underlying method. Therefore, since claims 1, 3, and 4 are rejected, claims 15, 17 and 18 are also rejected for the reasons above. A teaching that shows the functional equivalence will be included upon request.

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22. Claims 20, 22, and 23 are drawn to a software system that implements the method drawn in claims 1, 3, and 4, respectively. It is well known in the art that a system implementation is functionally equivalent to the underlying method. Therefore, since claims 1, 3, and 4 are rejected, claims 20, 22, and 23 are also rejected for the reasons above. A teaching that shows the functional equivalence will be included upon request.

23. Claims 25, 27, and 28 are drawn to a software system, using a carrier wave, that implements the method drawn in claims 1, 3, and 4, respectively. It is well known in the art that a system implementation is functionally equivalent to the underlying method. Therefore, since claims 1, 3, and 4 are rejected, claims 25, 27 and 28 are also rejected for the reasons above. A teaching that shows the functional equivalence will be included upon request.

Claim Rejections - 35 USC § 103

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lakshman as applied to claim 6 above, and further in view of Narad et al. (6,421,730).

For claim 8, Narad teaches that the central processor comprises a microsequencer (col. 40, lines 15-20). Lakshman does not expressly disclose this limitation. The examiner considers the type of processor to be a design choice. At the time the invention was made, one of ordinary skill in

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the art would have used a microsequencer to better implement clock cyclings (col. 40, lines 20-23).

Allowable Subject Matter

26. Claims 5, 19, 24, and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

27. The following is an examiner's statement of reasons for allowance: the examiner has determined that the related art do not teach or suggest the modification of this particular type of search argument for the expressed purpose and within the express embodiment thereof. Nor is there taught any motivation to combine with another system to produce this modification of the search argument. Therefore, the examiner has determined that claim 5 is allowable.

28. Claims 19, 24, and 29 teach similar limitations as claim 5 and are therefore allowable for the reasons above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

29. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin H Pollack whose telephone number is (703) 305-4641. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (703) 305-4003. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MHP
23 March 2004


RUPAL DHARIA
SUPERVISORY PATENT EXAMINER